Solutions Implementation Guide

McGraw-Hill Education Career Pathway Solutions

Solutions that Meet Your State's Career Pathway Needs

WIOA defines Career Pathways as a combination of rigorous and high-quality education, training, and other services that meet the following criteria:

- **Industry alignment:** Aligns with the skill needs of industry
- **Adequate preparation:** Prepares individuals to be successful in a full range of secondary or postsecondary education options
- **Skill integration:** Includes education offered concurrently with and in the same context as workforce preparation activities and training for a specific occupation or cluster
- **Degree/certification attainment:** Enables an individual to attain a secondary school diploma or its equivalent and at least one postsecondary credential
- **Pathway focused:** Helps an individual enter or advance within a specific occupational cluster

McGraw-Hill Education has a number of career pathway solutions to fit the program needs of a wide range of educational and training models. As providers begin making instructional and curricular determinations regarding their career pathway program plans, this solutions guide is a helpful tool for understanding how the wide range of contextualized workplace curriculum and resources we offer can be used as the basis for integrated skill instruction and training to meet your needs.

It Starts with Skills

McGraw-Hill Education's Career Pathways solutions are built upon understanding the core skills identified by industry and mapping backward from these to develop the content for all of our workforce materials. Additionally, we have developed an academic skill basis that focuses on the skills needed for career success in Applied Mathematics, Reading for Information, and Locating Information. Add in employer-identified essential skills and the digital literacy and critical thinking skills required for success in college and career, and you have the perfect foundation for moving your students toward college and career readiness.

Understanding how these skills can be integrated is a crucial element to ensuring instructional success, and that is where our solutions come in.

Industry Competency Models

For many years, the Department of Labor Employment and Training Administration (ETA) has provided tools for industries to develop competency models. These models allow ETA and its industry partners to identify the skills and competencies – including the personal effectiveness, academic, and workplace competencies – needed for general success, as well as industry-wide competencies relevant to all careers within a specific industry. For more information on the industry competency models that have been developed, visit the CareerOneStop website at http://www.careeronestop.org/competencymodel/.

Integrating Technical and Academic Skills

Using the competency models as a basis, McGraw-Hill Education has designed Bridge to Careers courses as part of its *Workforce Access* program in 6 high-growth industries. These courses provide an introduction to industry-wide technical competencies needed for success regardless of the particular pathway students choose within that industry.

The technical competencies form the outline for each course curriculum. Integrated into each core lesson are academic skills and workplace (essential or "soft") skill activities that relate to the technical content being taught. Each core lesson also includes additional "Skill Support" lessons (aligned to TABE) that provide academic skill-focused instruction foundational to the academic skills integrated into the main lesson.

The graphic below shows how academic skills are integrated with technical competences within the *Bridge to Careers in Manufacturing* course. Each of the lessons teaching the core concepts of Manufacturing Processes & Planning includes three integrated academic skill activities.

Using *Workforce Access* Courses with Your Students

Workforce Access courses are modeled after "bridge" programs that evolved as part of many early career pathways initiatives within adult education and are intended to support integrated skill delivery that replicates the I-BEST model. As such, they provide a curricular foundation for integrated skill instruction, one that can be tailored and built upon both by adult basic educators and technical skill instructors to meet the needs of local, regional, and state career pathway initiatives. Supporting the goal of "bridging" students from adult basic education into postsecondary education and training, the courses are aimed at adult basic education students and are intended to increase their likelihood of success as they transition into additional education, training, and careers.

Integrated skill courses are provided within six high-growth industries:

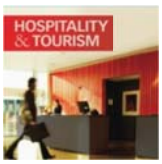
- Bridge to Careers in Health Sciences
- Anatomy & Physiology
- Medical Terminology

- Bridge to Careers in Transportation, Distribution & Logistics
- Introduction to Supply Chain Management

- Bridge to Careers in Information Technology – Computer Fundamentals
- Bridge to Careers in Cybersecurity
- Bridge to Careers in Networking

- Bridge to Careers in Business Management & Administration
- Microsoft Office Specialist: Word 2010

- Bridge to Careers in Manufacturing
- Introduction to Industrial Maintenance

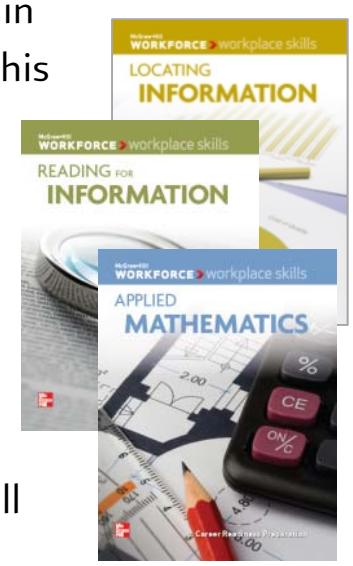


- Introduction to Hospitality & Tourism

Additional courses – *Transitions Math* and *Tools for Workplace Success* (essential or "soft" skills) – further develop crucial skills for college and career readiness.

Contextualizing Your Adult Basic Education Curriculum

Depending on the levels your students and the focus of your program, you may wish to focus on core academic skills as the core of your curriculum and add a layer of workplace contextualization to establish relevance for students as to how these academic skills will be needed in their future careers. The *Workplace Skills* series does this by aligning to the skills tested as part of the WorkKeys® assessments.



The *Career Readiness Preparation* series delivers academic skill instruction in Applied Mathematics, Reading for Information, and Locating Information, with all instruction and practice contextualized within relevant workplace scenarios within careers that span all 16 career clusters. With alignments to the College and Career Readiness Standards, you can be assured students are developing the skills they need, regardless of their academic or career pursuits.

Helping Students Become "Pathway-Focused"

Before students begin their career pathway journeys, it is essential they understand the industry in which they are pursuing careers. The *Career Companion* series supports this process by providing extensive career exploration information including the skills and training needed to pursue careers in each of the 16 career clusters, along with academic skill practice contextualized to careers within each cluster.

McGraw-Hill Education's Workplace Skill Ecosystem

McGraw-Hill Education's Career Pathways materials provide instruction and practice based on a single set of applied, academic skills. How these skills are integrated into your programming depends upon on the course focus and intended outcomes. Because each of our workforce programs is rooted in the same skill set, our materials can be used together to provide the perfect balance of academic skill instruction and practice, industry-specific technical skill instruction and practice, and career exploration to meet your career pathway needs as defined by WIOA.

Continuum of Workplace Skill Development

Instruction	Practice	Integration
McGraw-Hill WORKFORCE workplace skills CAREER READINESS PREPARATION	McGraw-Hill WORKFORCE career companions CAREER PATHWAY EXPLORATION	McGraw-Hill WORKFORCE access
• Instruction is organized by applied academic skills. • All instruction, examples, and problems are presented within various workplace contexts.	• Skill practice is organized by applied academic skills. • All instruction, examples, and problems are presented within the context of a specific industry.	• Instruction is organized by industry-wide technical competencies. • Applied, academic skills are integrated into instruction as applicable.

The skills that are included within our Workplace Skill Ecosystem are aligned to the National Career Readiness Certificate (NCRC®). The ecosystem was developed by identifying the skills that are included at certificate Levels 3 – 7 and categorizing them into a thematic topic/skill hierarchy within the subject areas of Reading for Information, Applied Mathematics, and Locating Information.

Reading for Information Skills

These skills are important for reading, understanding, and acting upon written information presented within workplace documents.

TOPIC 1: Read and Understand Information Workplace Documents

SKILL 1: Identify Main Idea and Details
SKILL 2: Identify Details that Are Not Clearly Stated

TOPIC 2: Follow Instructions from Workplace Documents

SKILL 3: Understand and Apply Basic and Multi-Step Instructions
SKILL 4: Apply Instructions to Unique Situations

TOPIC 3: Define and Use Words in the Workplace

SKILL 5: Determine the Meaning of New Words
SKILL 6: Understand Unique Words and Acronyms
SKILL 7: Understand and Apply Technical Terms and Jargon

TOPIC 4: Understand and Follow Policies & Procedures in Workplace Documents

SKILL 8: Apply Workplace Policies and Procedures
SKILL 9: Understand the Rationale Behind Workplace Policies

Applied Mathematics Skills

These skills are essential for performing the mathematical functions required in a majority of workplace situations.

TOPIC 1: Perform Basic Arithmetic Calculations to Solve Workplace Problems

SKILL 1: Solve Problems with Whole Numbers and Negative Numbers
SKILL 2: Use Fractions, Decimals, and Percents to Solve Workplace Problems

TOPIC 2: Apply Computations to Solve Workplace Problems

SKILL 3: Use General Problem-solving
SKILL 4: Solve Problems in Geometry

TOPIC 3: Solve Measurement Problems

SKILL 5: Calculate with Conversions and Formulas
SKILL 6: Manipulate Formulas to Solve Problems

TOPIC 4: Make Spending Decisions to Solve Workplace Problems

SKILL 7: Calculate Costs and Discounts
SKILL 8: Make Consumer Comparisons

Locating Information Skills

These skills focus upon effective locating, analyzing, and making use of information that is presented within workplace graphics.

TOPIC I: Locate and Compare Information in Graphics

SKILL 1: Find information in Workplace Graphics
SKILL 2: Enter Information into Workplace Graphics

TOPIC 2: Analyze Trends in Workplace Graphics

SKILL 3: Identify Trends in Workplace Graphics
SKILL 4: Compare Trends in Workplace Graphics

TOPIC 3: Use Information from Workplace Graphics

SKILL 5: Summarize Information in Workplace Graphics
SKILL 6: Make Decisions Based on Workplace Graphics

Designing Your Instructional Solution

The career pathway instructional solution that works best for your students depends on student levels and your program's goals.

Contextualized Instruction

Contextualized instruction refers to instruction in which the curriculum base is academic skill instruction that is presented within workplace and industry-specific contexts to provide relevance to the learner. Such instruction is particularly well-suited for programs that are intended to prepare students for academic skills exams, such as the WorkKeys® assessments, TABE® test, or High School Equivalency exams.

Solutions that are contextualized clearly articulate the academic skill progression as the primary curriculum framework and, as often as possible, develop these skills within realistic workplace scenarios.

Integrated Instruction

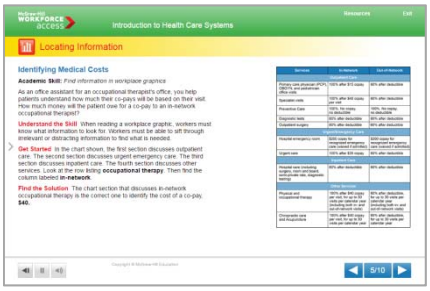
Integrated instruction refers to instruction in which the curriculum is based on industry-specific technical skills and competencies. In training programs that integrate instruction, the technical skills curriculum is then infused, or integrated, with relevant academic skills as they relate to technical skills being taught. Oftentimes the technical skills are determined by frameworks such as industry competency models or the skill objectives of certification exams within a particular industry.

One of the key benefits of integrated training programs is they can shorten the timeframe needed for lower-level learners enter into high-growth, family-sustaining career pathways by working students toward key certifications and credentials. Ideally, even after attaining employment, learners continue their education through on-the-job training or postsecondary coursework aligned to their career pathway.

Use Case 1: Health Science Bridge Program (Integrated)

The goal of this program is to bridge adult basic education students into credit-bearing community college coursework with a pathway focus on careers in Health Science. Students need to develop the academic skills needed for postsecondary success, while learning technical content.

Skill Integration: *Workforce Access*

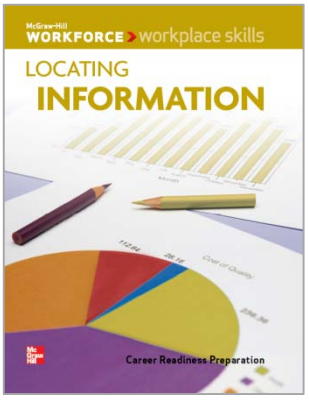


The Workforce Access *Bridge to Careers in Health Science* course is based on the health science industry competency model. This lesson, *Introduction to Health Care Systems*, has an integrated skill activity focused on finding information in workplace graphics, as well as an additional foundational skill support lesson. The lesson assessment includes items that assess this integrated academic skill.

Skill Practice: *Career Companions*

The *Health Science* Career Companion includes practice problems for each of the skills within the Workplace Skill Ecosystem, all contextualized to Health Sciences careers. Students can use the skill lessons on pages 62 – 65 to get additional practice on finding and entering information into workplace graphics, all within Health Sciences contexts.

Skill Instruction/Remediation: *Workplace Skills*



If students have difficulty with finding information within workplace graphics, the *Locating Information* book has the following instructional lessons to support learners:

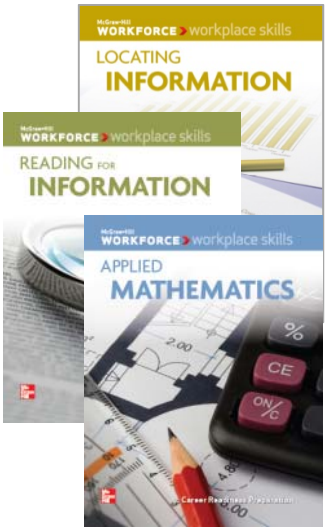
Lesson 1: *Find Information in Graphics*
Lesson 2: *Add Missing Information to Graphics*
Lesson 3: *Find Information from One or Two Graphics*
Lesson 8: *Focus on Relevant Information in Graphics*

Use Case 2: Career Readiness Certification Program (Contextualized)

The goal of this program is to help students determine a career pathway of interest, and then to work with these students on developing skills contextualized within their industry of choice to help them pass either a High School Equivalency test, or an alternative test such as the WorkKeys® assessments.

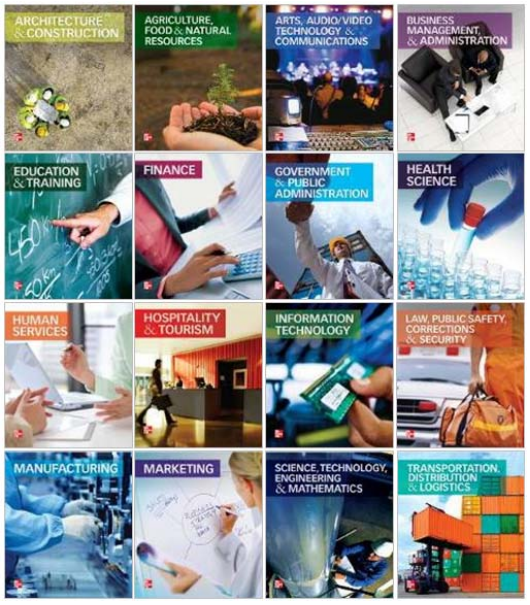
Contextualized Skill Instruction: *Workplace Skills*

Students work on skills within *Reading for Information, Applied Mathematics,* and *Locating Information* either in whole-class settings or individually based on their skill levels. If students encounter difficulty with any of the applied skill lessons within any of these subjects, they can be referred to foundational skill lessons aligned to TABE® basic skill levels, which are provided later in this document.



Contextualized Skill Practice & Career Exploration: *Career Companions*

Based on students' career interests, they work within the *Career Companion* specific to the industry in which they wish to pursue a career to gain additional skill practice of the skills covered in the *Workplace Skills* books. Using the Curriculum Crosswalks & Alignments (separate document), each student can be provided with additional, industry-specific practice on skills related to the *Workplace Skills* lesson. In addition to this skill practice, students can use the *Career Companions* to learn more about their chosen industry, including career ladders, required education and training, and industry outlooks.



Career Pathway Solutions Product List

McGraw-Hill WORKFORCE workplace skills
CAREER READINESS PREPARATION

Student Editions	ISBN	Teacher Editions	ISBN
Applied Mathematics	978-0-07-657481-0	Applied Mathematics	978-0-07-661080-8
Locating Information	978-0-07-657482-7	Locating Information	978-0-07-661081-5
Reading for Information	978-0-07-655574-1	Reading for Information	978-0-07-661082-2
Basic Skills for the Workplace	978-0-07-661062-4	Basic Skills for the Workplace	978-0-07-661084-6

McGraw-Hill WORKFORCE workplace skills
ESSENTIAL SKILLS FOR THE WORKPLACE

Student Editions	ISBN	Teacher Editions	ISBN
Tools for Workplace Success	978-0-07-661063-1	Tools for Workplace Success	978-0-07-661086-0
Writing for Work	978-0-07-657792-7	Writing for Work	978-0-07-661083-9

McGraw-Hill WORKFORCE career companions
CAREER PATHWAY EXPLORATION

Title	ISBN	Title	ISBN
Agriculture, Food & Natural Resources	978-0-07-661064-8	Human Services	978-0-07-661073-0
Architecture & Construction	978-0-07-661065-5	Information Technology	978-0-07-661074-7
Arts, Audio/Video Technology & Communications	978-0-07-661066-2	Law, Public Safety, Corrections & Security	978-0-07-661075-4
Business Management & Administration	978-0-07-661067-9	Manufacturing	978-0-07-661076-1
Education & Training	978-0-07-661068-6	Marketing, Sales, & Service	978-0-07-661077-8
Finance	978-0-07-661069-3	Science, Technology, Engineering & Math	978-0-07-661078-5
Government & Public Administration	978-0-07-661070-9	Transportation, Distribution & Logistics	978-0-07-661079-2
Health Science	978-0-07-661071-6	Career Clusters Package	978-0-07-661092-1
Hospitality & Tourism	978-0-07-661072-3	*(1 copy of each Career Cluster book)*	

Note: *Special value sets also available for all of the print titles above (student editions and Career Companions).*

McGraw-Hill WORKFORCE access

Manufacturing		**Hospitality and Tourism**	
Bridge to Careers in Manufacturing	978-0-07-663981-6	Bridge to Careers in Hospitality & Tourism	978-0-07-663992-2
Introduction to Industrial Maintenance	978-0-07-664019-5		
Health Sciences		**Information Technology**	
Bridge to Careers in Health Sciences	978-0-07-663986-1	Bridge to Careers in IT: Computer Fundamentals	978-0-07-663987-8
Medical Terminology	978-0-07-663982-3	Bridge to Careers in Networking	978-0-07-663997-7
Introduction to Anatomy & Physiology	978-0-07-663998-4	Bridge to Careers in Security	978-0-07-664028-7
Transportation, Distribution, and Logistics		**Business Management and Administration**	
Bridge to Careers in TDL	978-0-07-663993-9	Bridge to Careers in Business Management	978-0-07-664034-8
Introduction to Supply Chain Management	978-0-07-664015-7	Microsoft Office Specialist: Word 2010	978-0-07-663980-9
General Workplace Skills			
Tools for Workplace Success (Soft Skills)	978-0-07-663984-7		
Transitions Math	978-0-07-663999-1		